

What is claimed is:

1. A method of fabricating a magnetized fan, comprising:
 - a) performing arrangement of N and S poles according required magnetic sectors of the fan;
 - 5 b) injecting a magnetic material into the fan according to the arrangement of the N and S poles; and
 - c) magnetizing the magnetic sectors of the fan to generate a magnetic force.
2. The method as claimed in Claim 1, wherein the magnetic sectors
10 include axial-, radial-, radiation- or two-directional, or multi-polar sectors.
3. The method as claimed in Claim 1 wherein the arrangement of the N and S poles includes isotropic, anisotropic or multi-polar arrangement.
4. The method as claimed in Claim 1, wherein the magnetic material includes ferrite magnetic material, SmCo magnetic material, NdFeB magnetic
15 material or FeCoNi magnetic material.
5. The method as claimed in Claim 1, wherein the magnetic material is powdered and processed to form magnetic glue particles.
6. The method as claimed in Claim 5, further includes mixing the magnetic material, resin and plastic material to form particles.
- 20 7. The method as claimed in Claim 1, wherein step (b) includes injecting the magnetic material by injection, baking, sintering or powder metallurgy.
8. The method as claimed in Claim 1, further comprising performing magnetic field analysis to design a mold, fusing the magnetic material, and injecting the fused magnetic material into the mold before step (b).
- 25 9. The method as claimed in Claim 1, wherein the magnetization step in step (c) includes conducting electricity of the magnetic material.
10. The method as claimed in Claim 1, further comprising a step of using

a magnetization seat.

11. The method as claimed in Claim 10, wherein step (b) comprises placing the fan in the magnetization seat, and applying a voltage to the magnetization seat to generate a magnetic field, so as to magnetize the fan.

5 12. The method as claimed in Claim 10, wherein the magnetization seat includes a single-side magnetization structure, a complex magnetization structure, outer circumference multi-pole magnetization structure, or an inner circumference multi-pole magnetization.

10 13. A magnetized fan, including a hub and a plurality of blades radially extending from a periphery of the hub, wherein the magnetic fan includes a built-in magnetic material to form a plurality of magnetic sectors constructed by a plurality of N and S poles.

14. The fan as claimed in Claim 12, wherein the blades include axial-flow blades, centrifugal-flow blades, inclined-flow blades or transverse-flow blades.

15 15. The fan as claimed in Claim 12, wherein the magnetic sectors are distributed in the hub, the periphery of the hub, the blades or terminuses of the blades.

16. The fan as claimed in Claim 13, wherein the magnetic material is built in all of the fan, or a portion of the fan.

20 17. The fan as claimed in Claim 13, wherein the magnetic material includes ferrite magnetic material, SmCo magnetic material, NdFeB magnetic material or FeCoNi magnetic material.